

Method and system for autonomic performance improvements
in an application via memory relocation

1 / 25

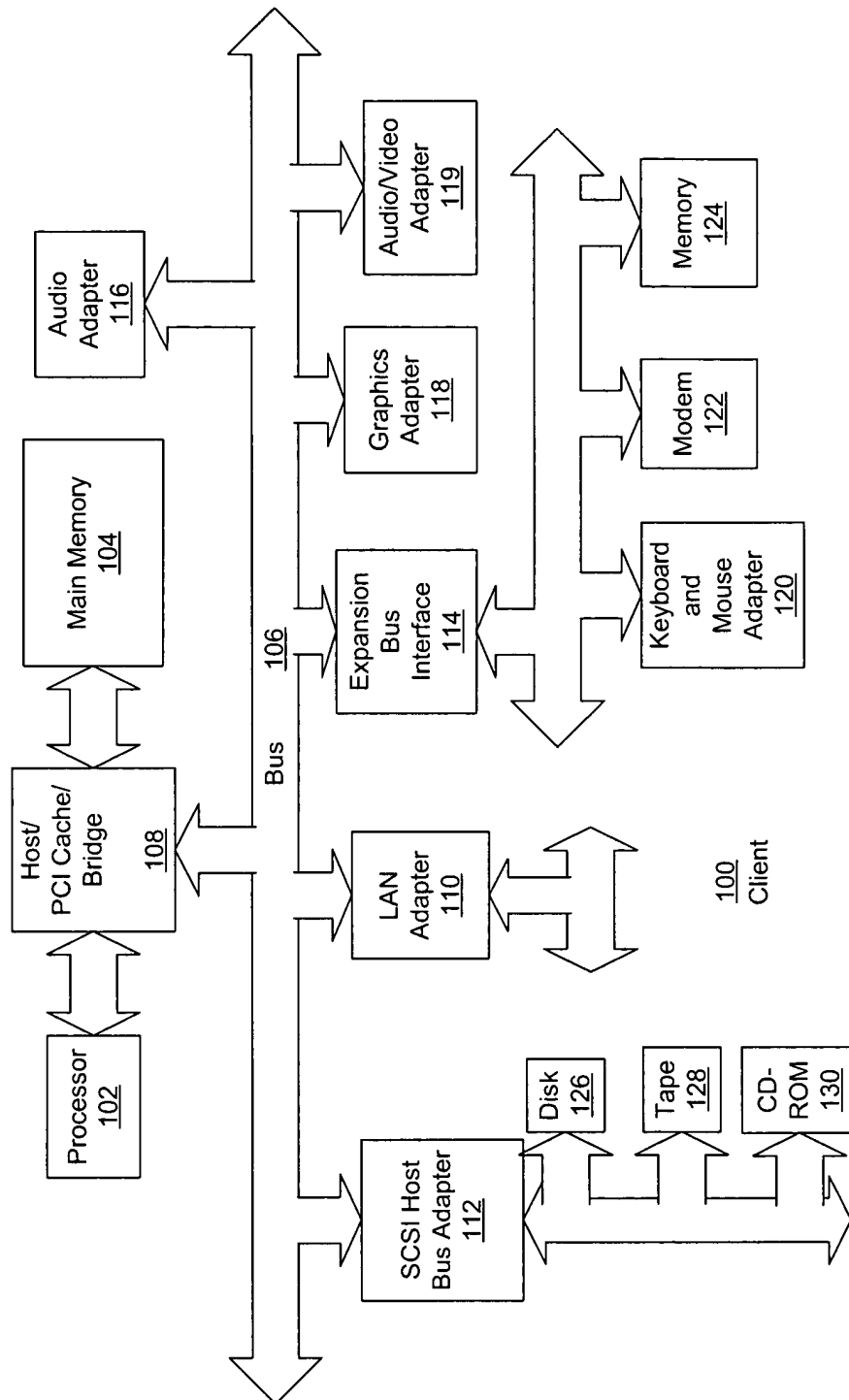
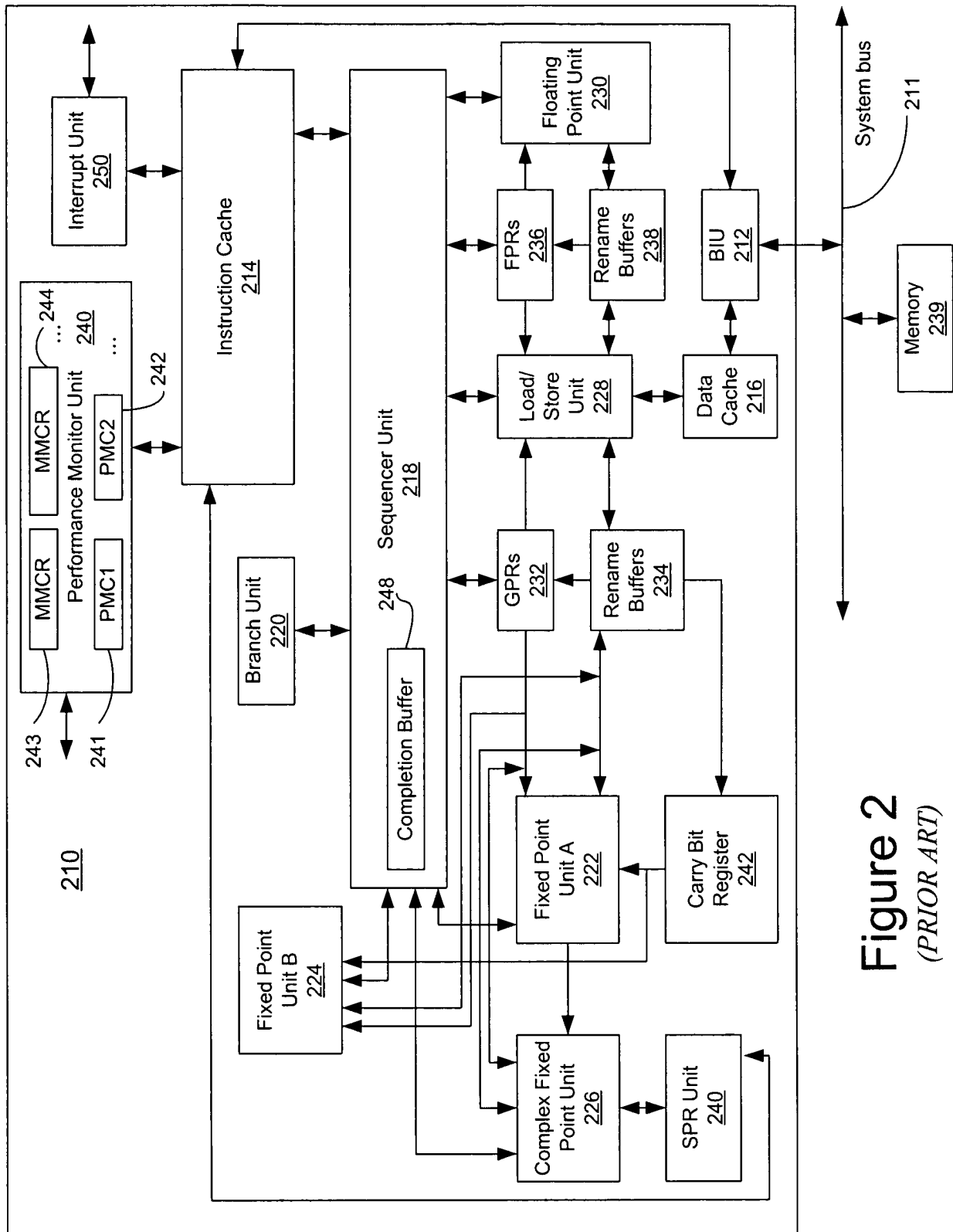


Figure 1
(PRIOR ART)

Method and system for autonomic performance improvements
in an application via memory relocation

2 / 25

**Figure 2**
(PRIOR ART)

Method and system for autonomic performance improvements
in an application via memory relocation

3 / 25

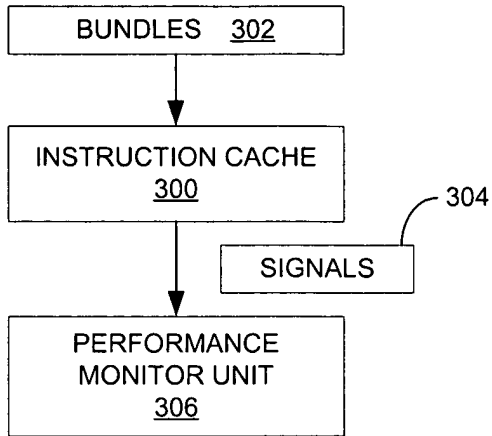


Figure 3

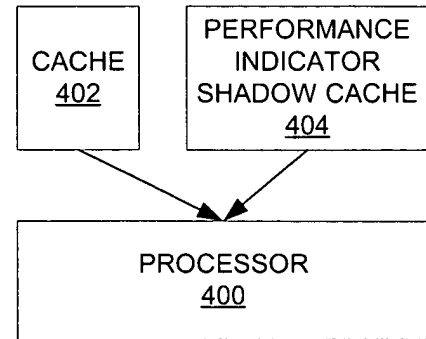


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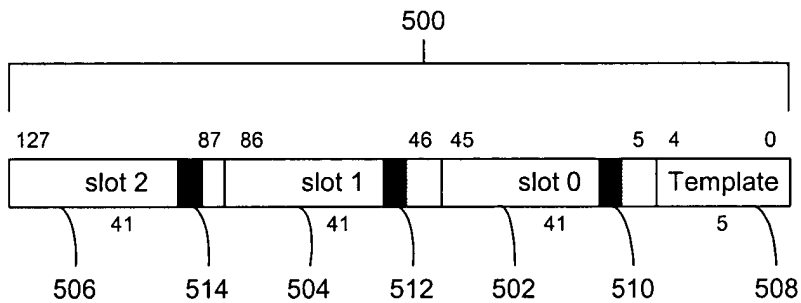


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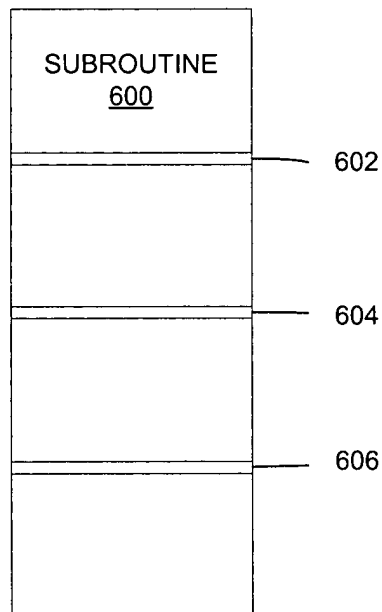


Figure 6A

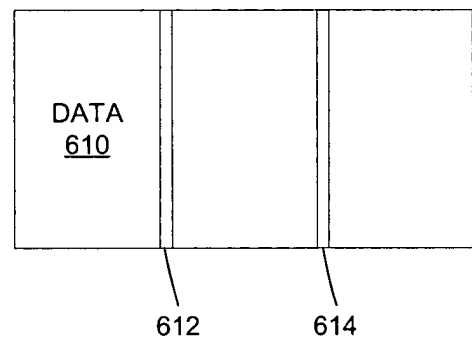


Figure 6B

Method and system for autonomic performance improvements
in an application via memory relocation

4 / 25

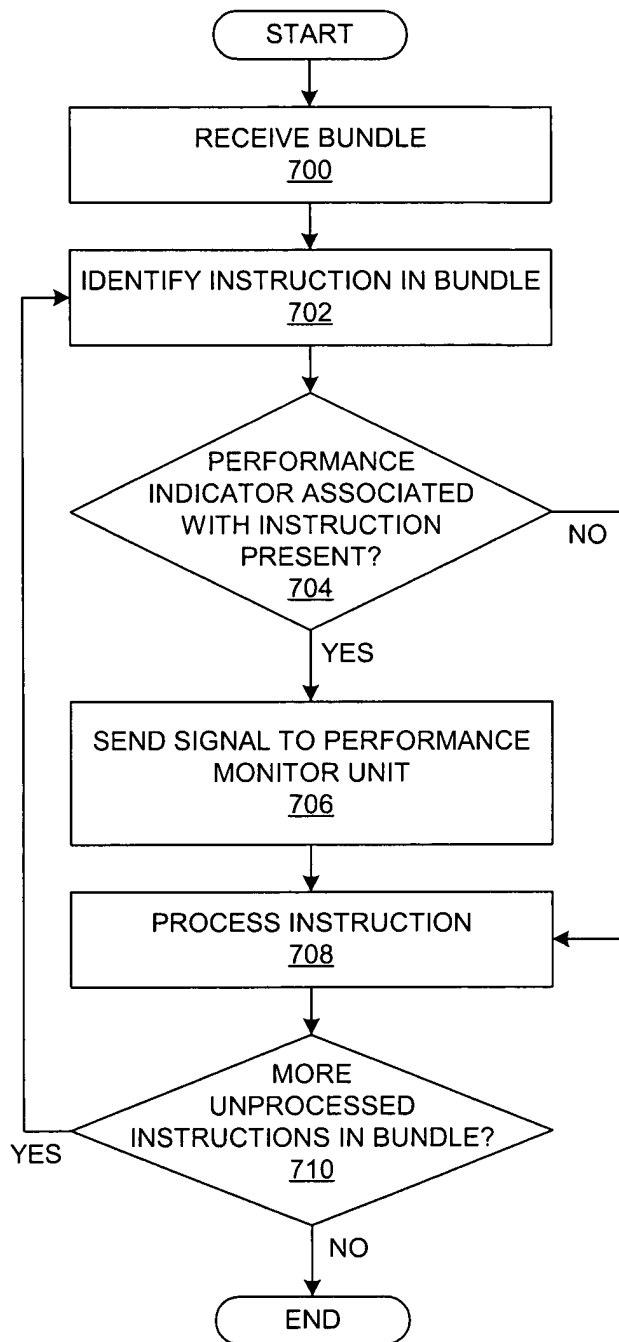


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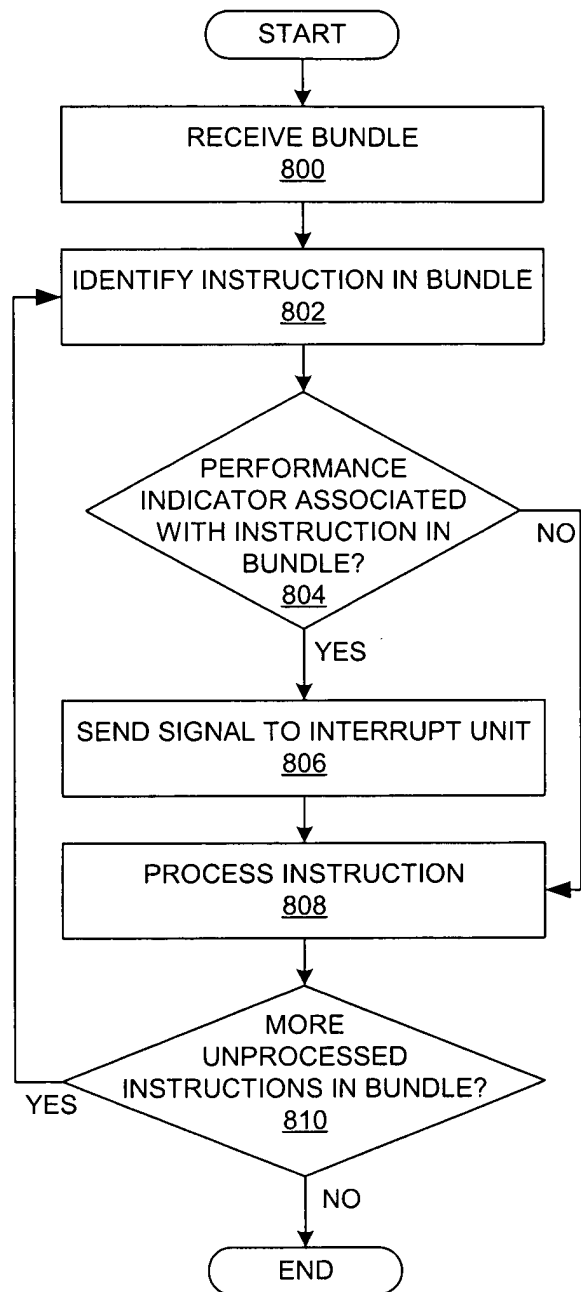


Figure 8

Method and system for autonomic performance improvements
in an application via memory relocation

5 / 25

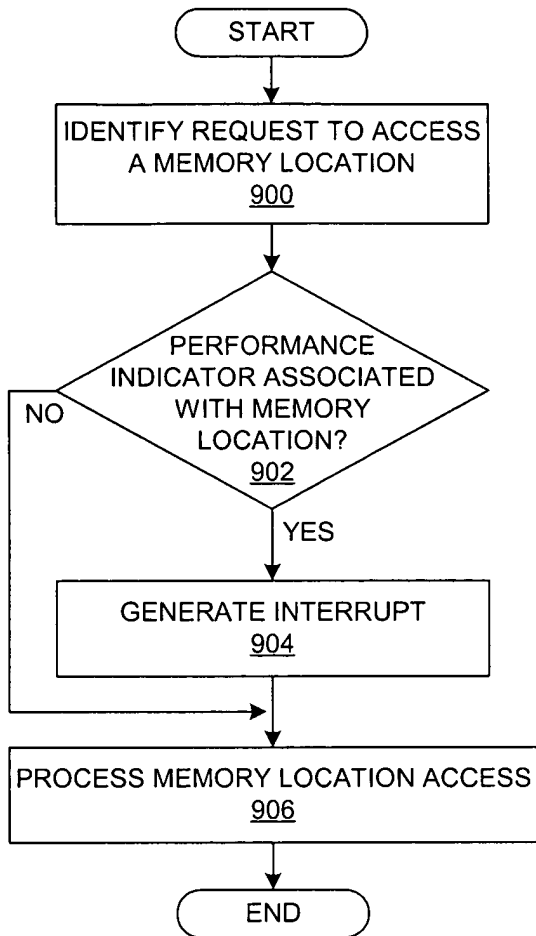


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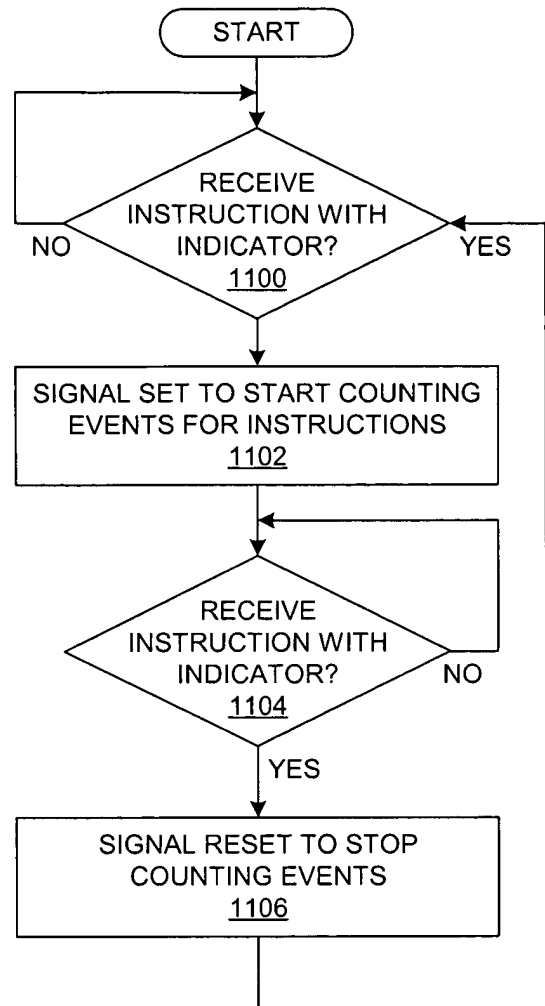


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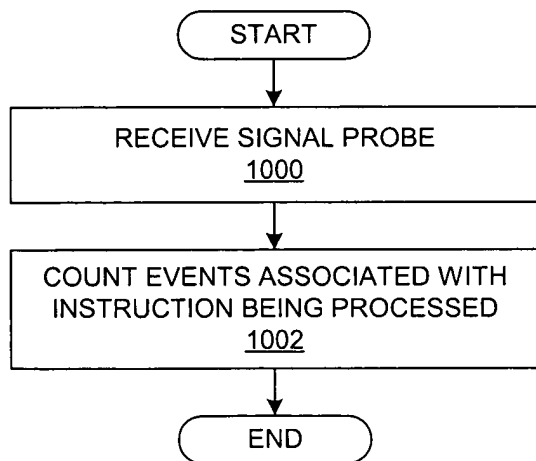


Figure 10

Method and system for autonomic performance improvements
in an application via memory relocation

6 / 25

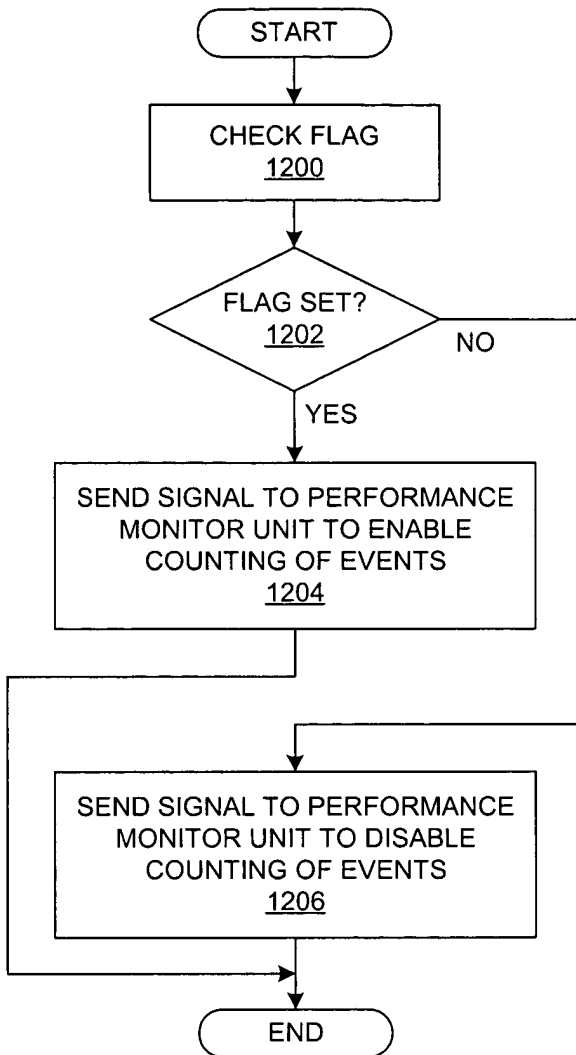


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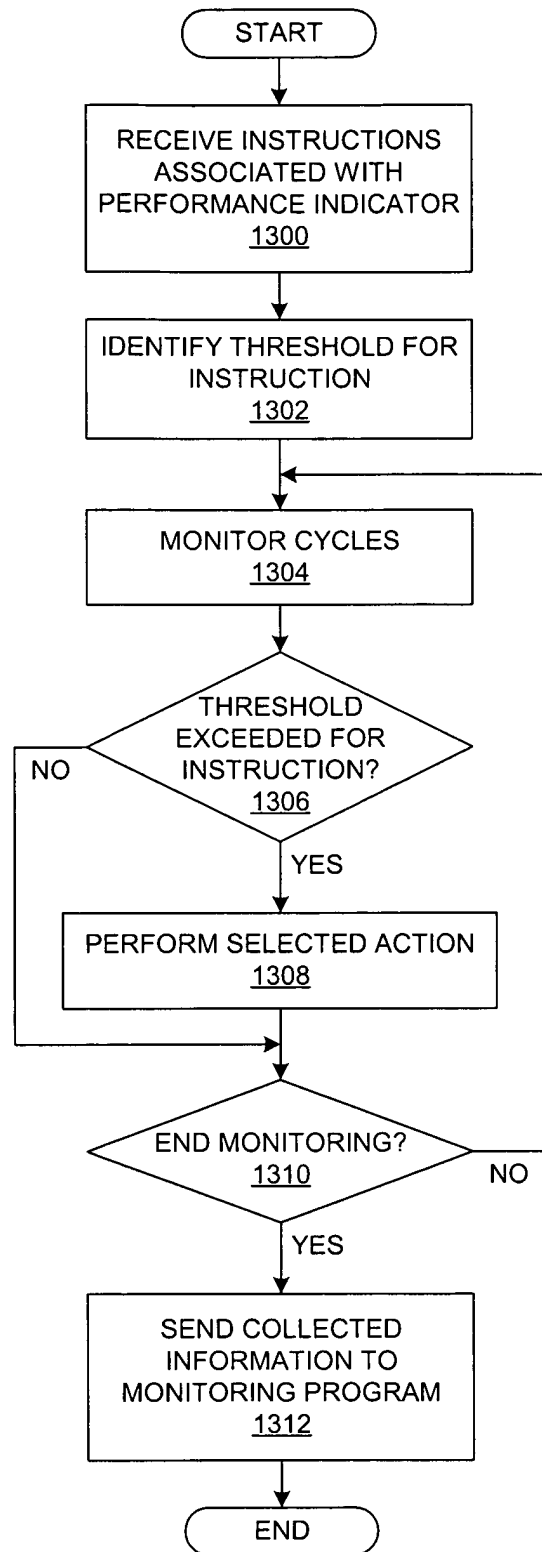


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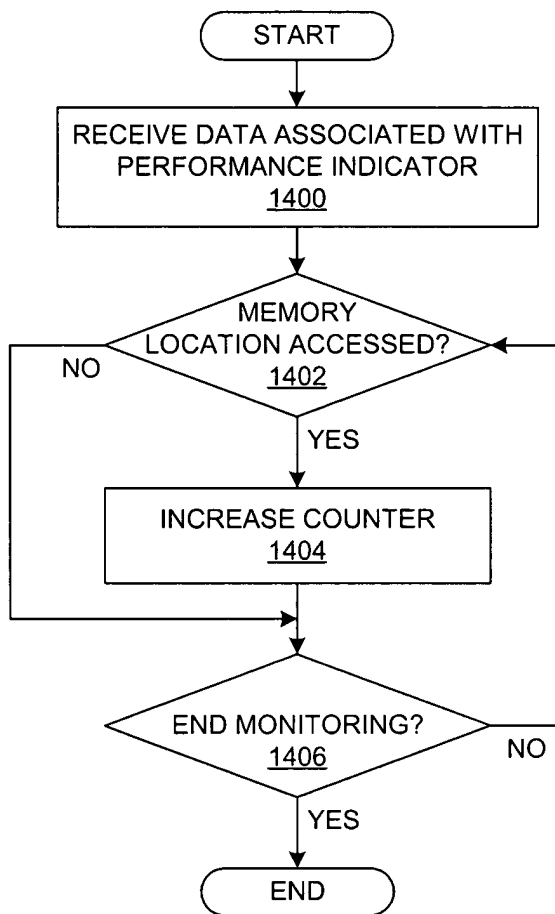


Figure 14

Method and system for autonomic performance improvements
in an application via memory relocation

8 / 25

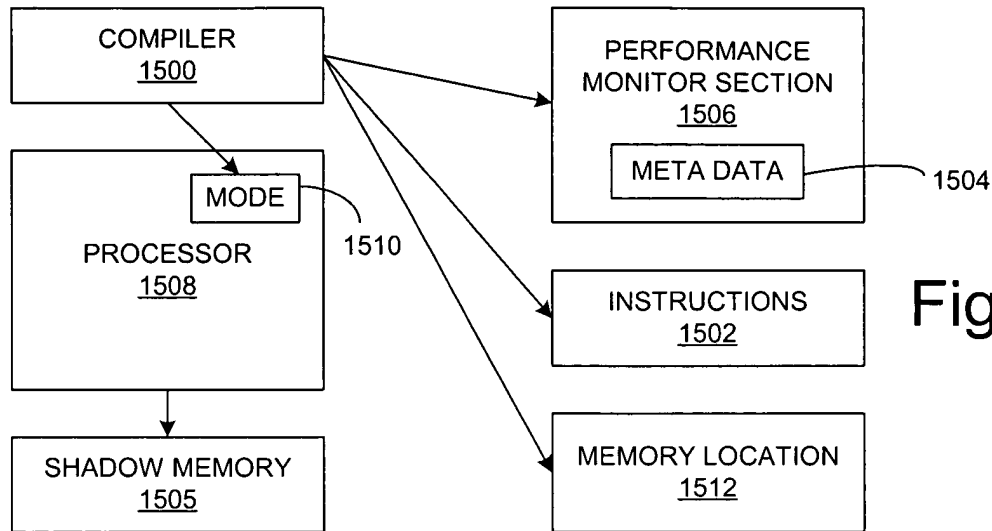


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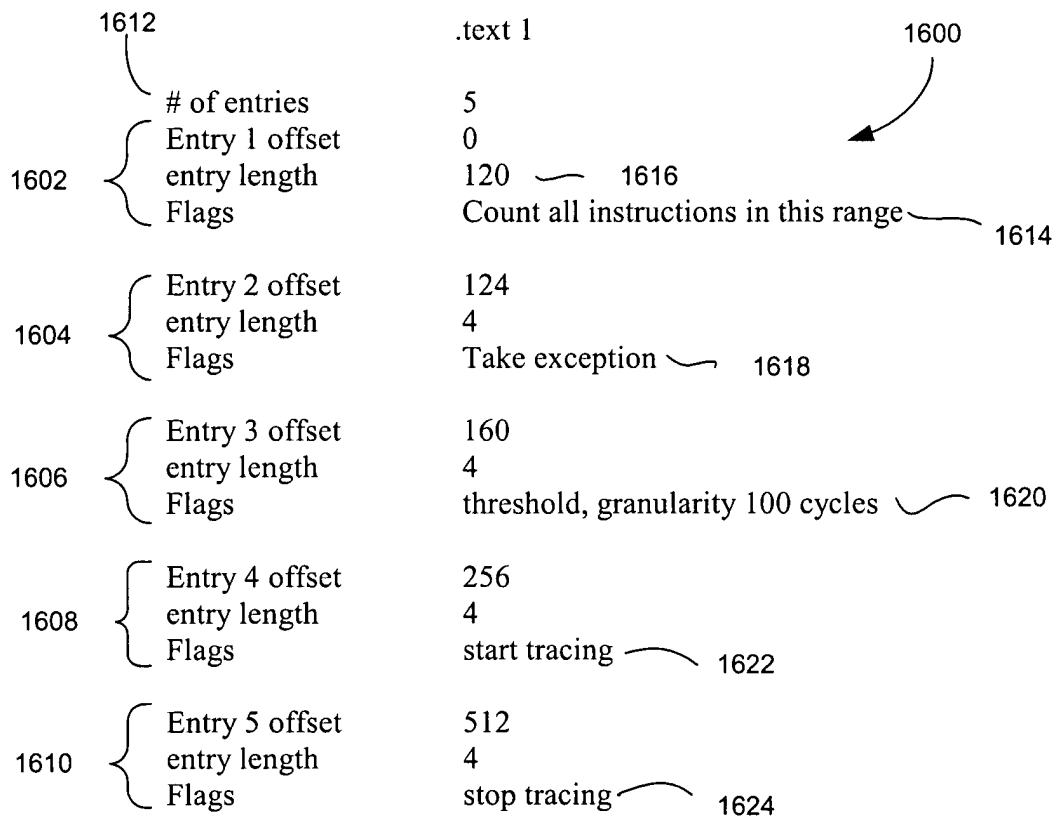


Figure 16

Method and system for autonomic performance improvements
in an application via memory relocation

9 / 25

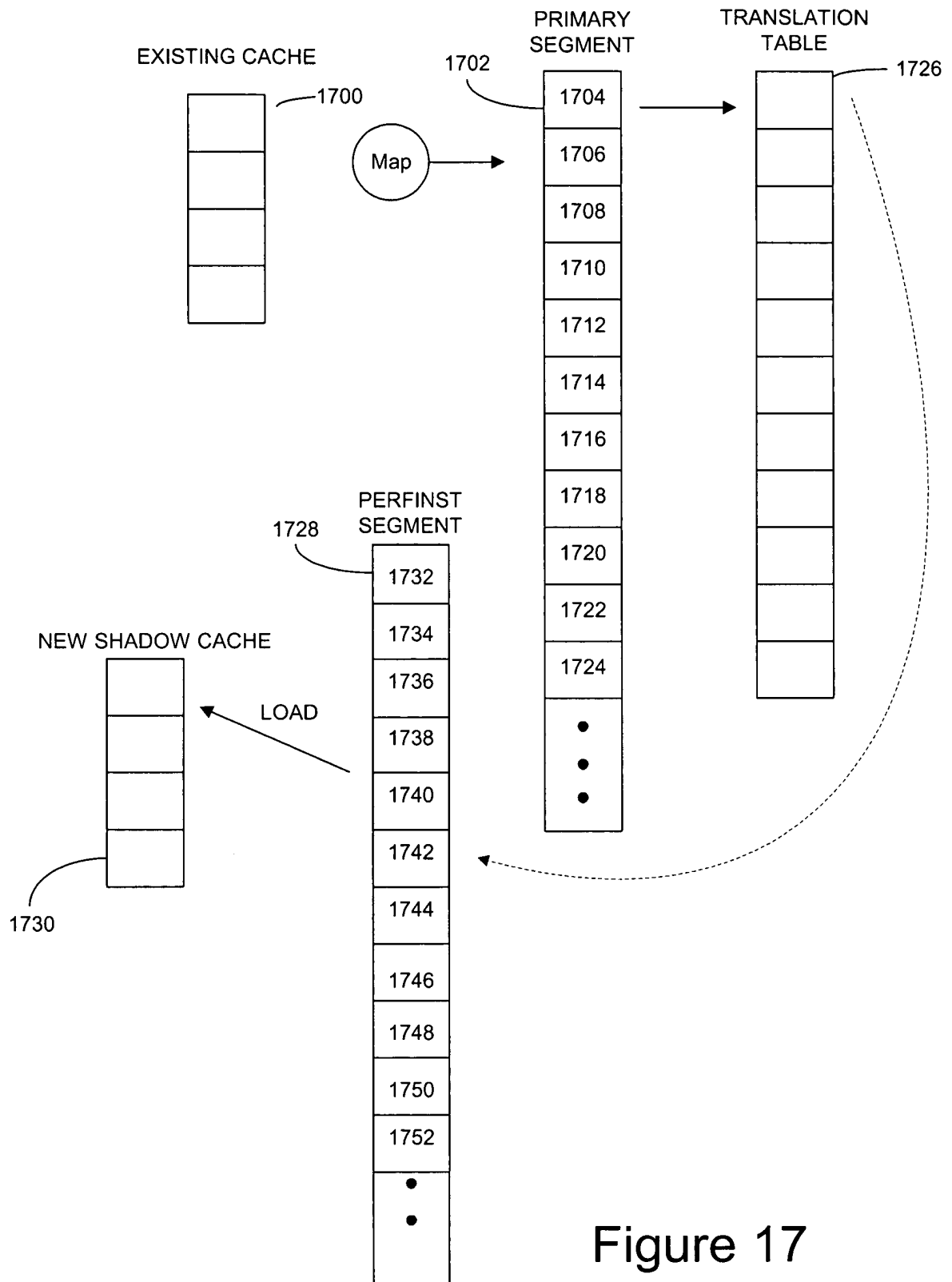


Figure 17

Method and system for autonomic performance improvements
in an application via memory relocation

10 / 25

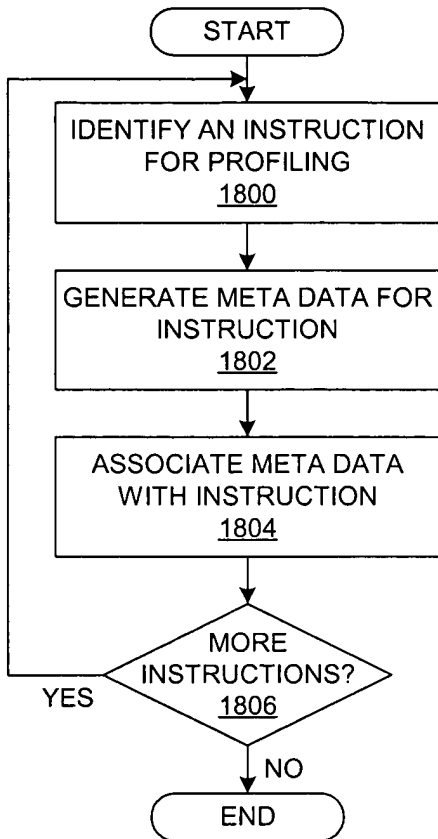


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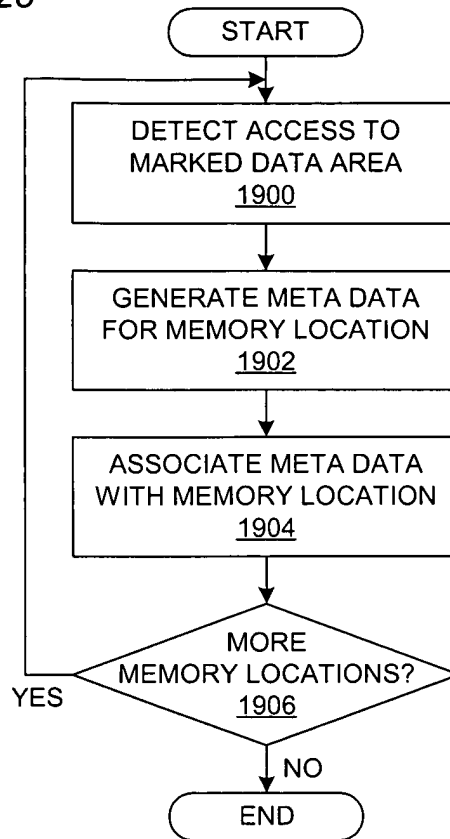


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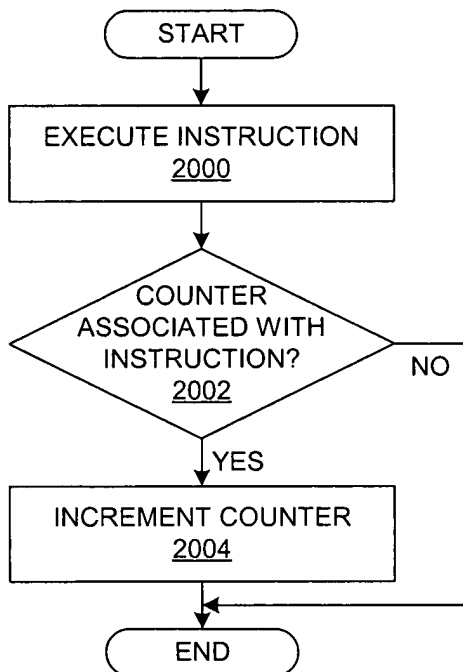


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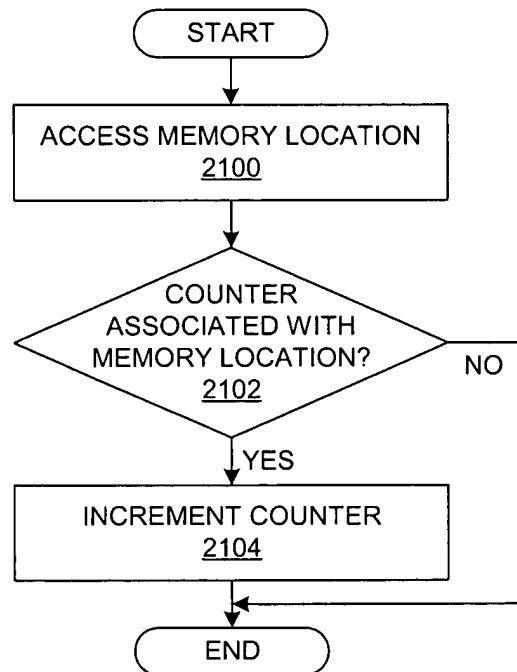


Figure 21

11 / 25



Method and system for autonomic performance improvements
in an application via memory relocation

12 / 25

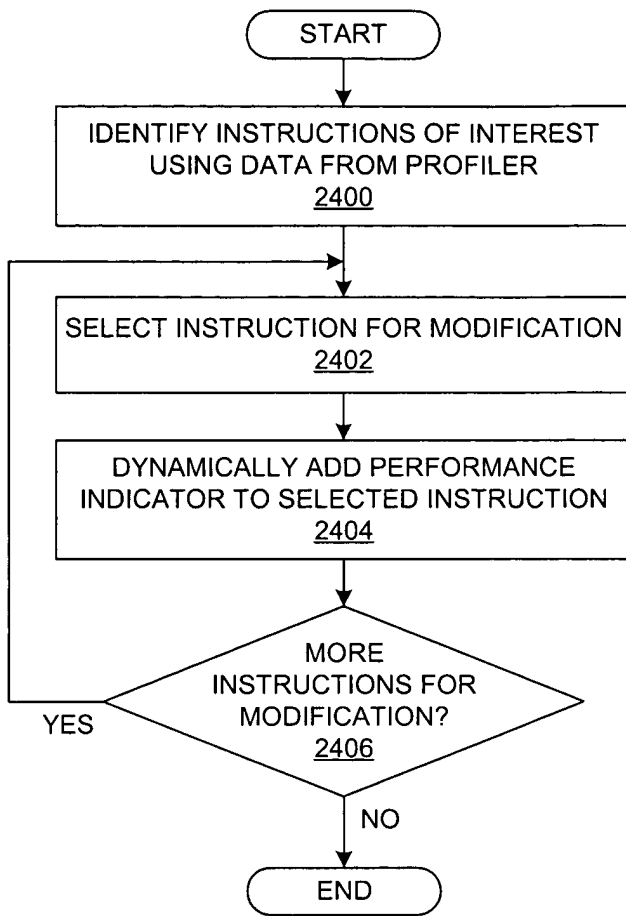


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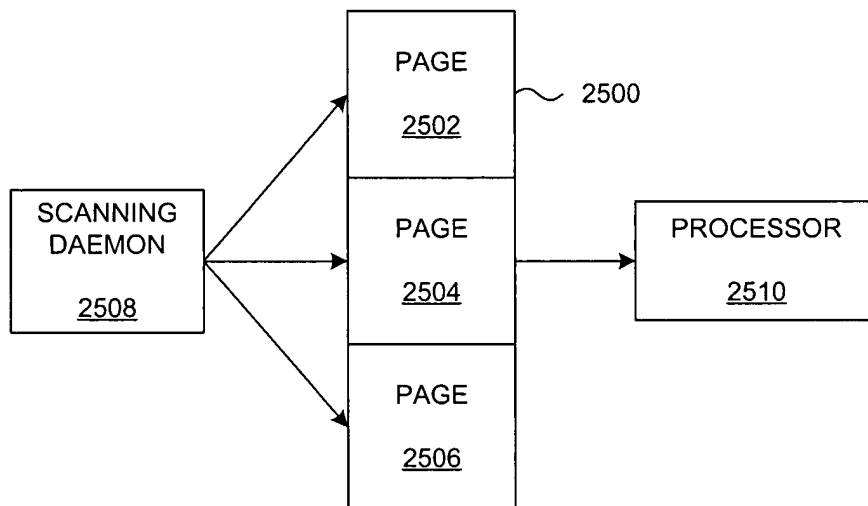


Figure 25

Method and system for autonomic performance improvements
in an application via memory relocation

13 / 25

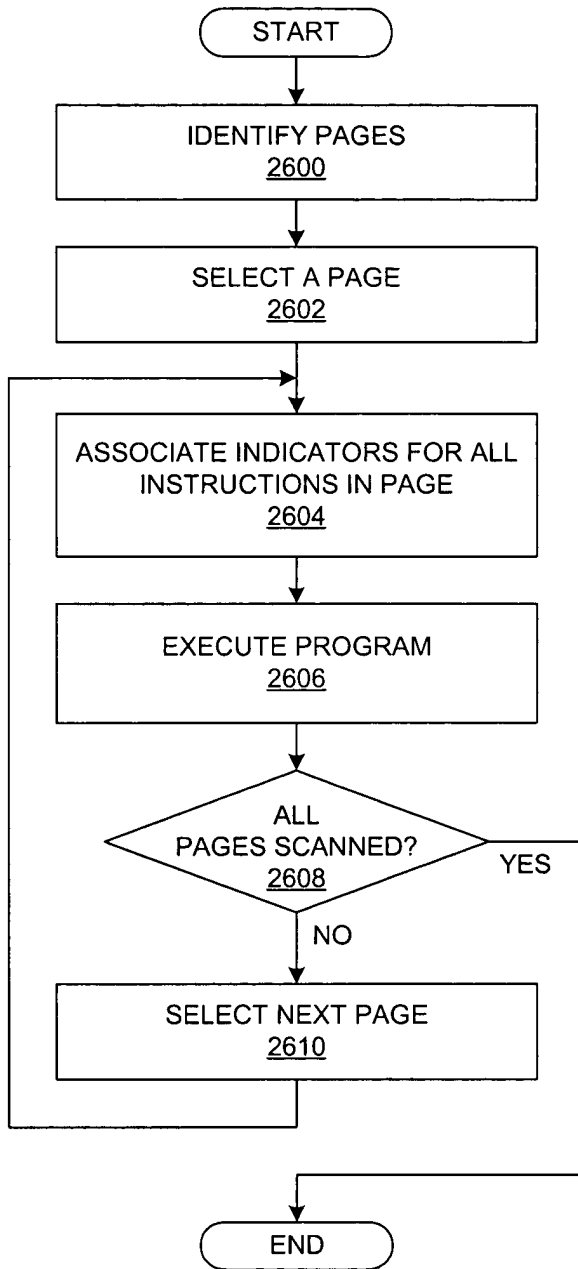


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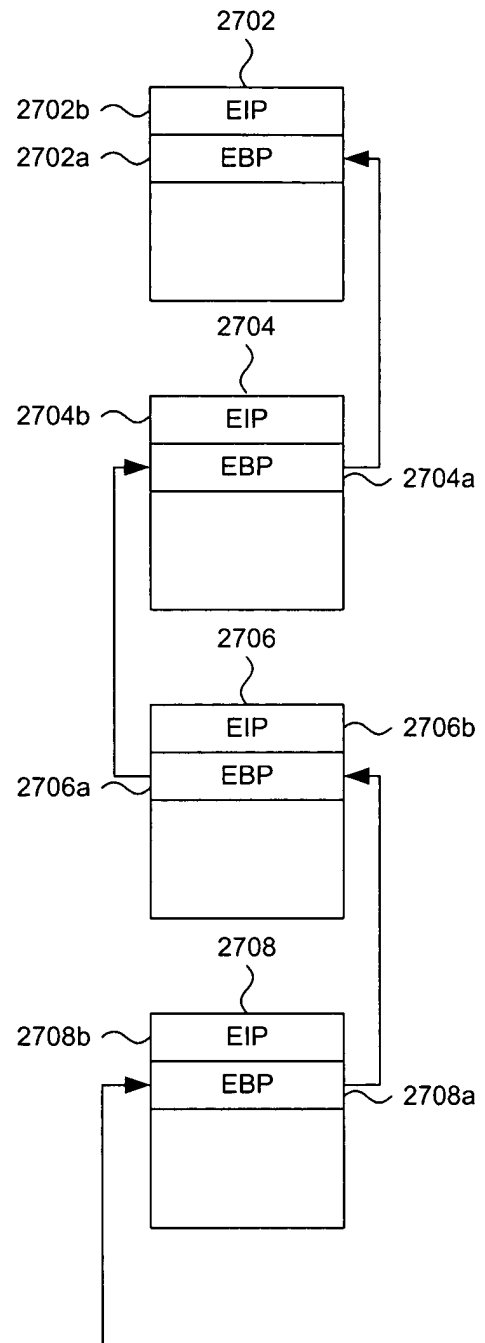


Figure 27

Method and system for autonomic performance improvements
in an application via memory relocation

14 / 25

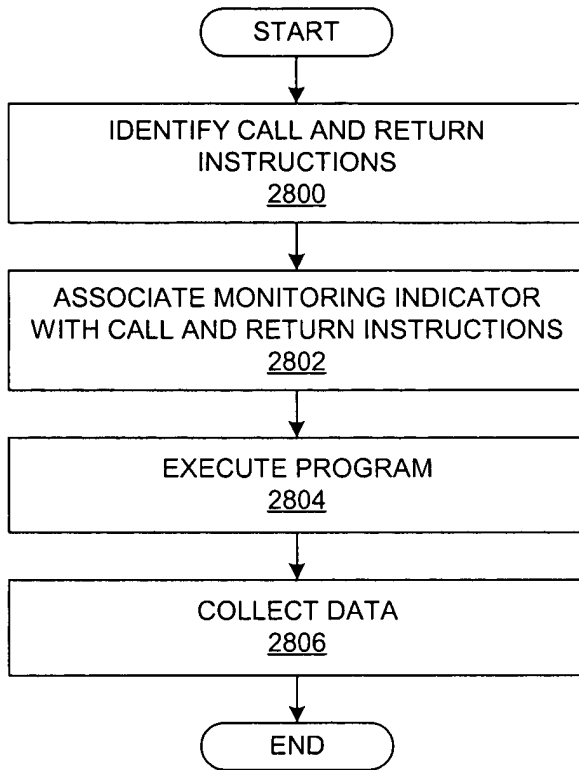


FIGURE 28

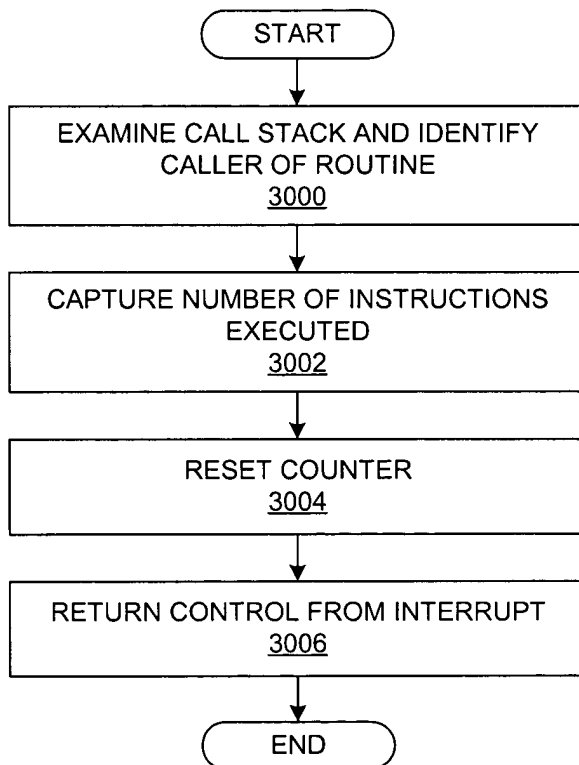


FIGURE 30

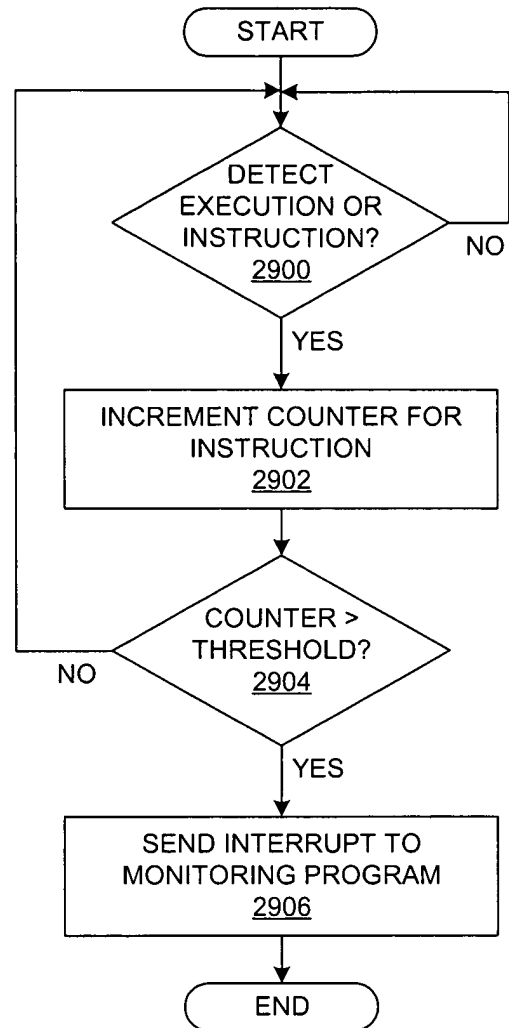


FIGURE 29

Method and system for autonomic performance improvements
in an application via memory relocation

15 / 25

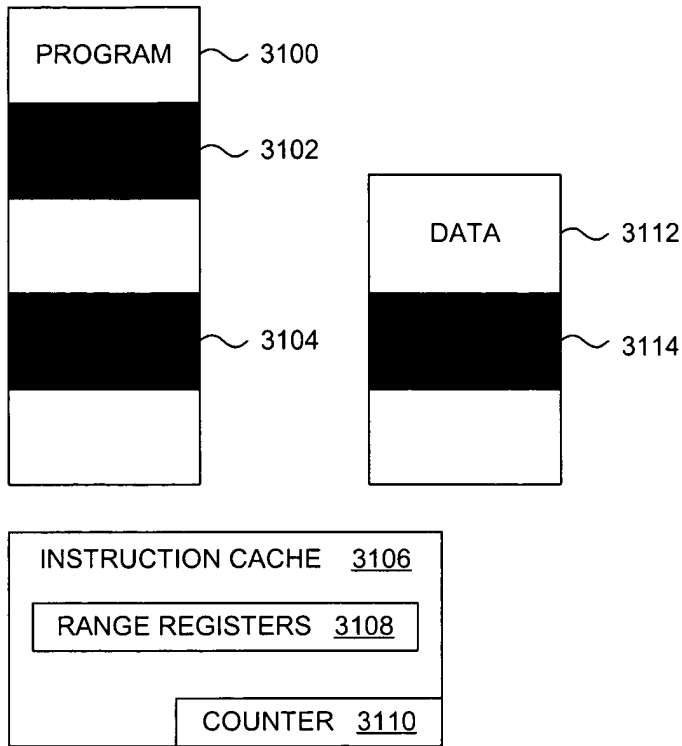


FIGURE 31

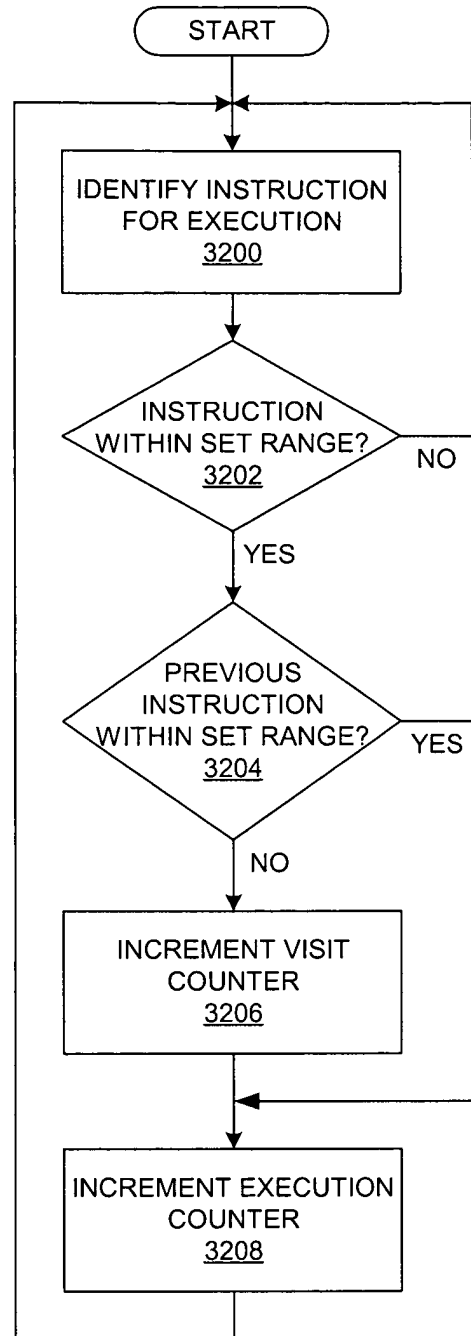


FIGURE 32

Method and system for autonomic performance improvements
in an application via memory relocation

16 / 25

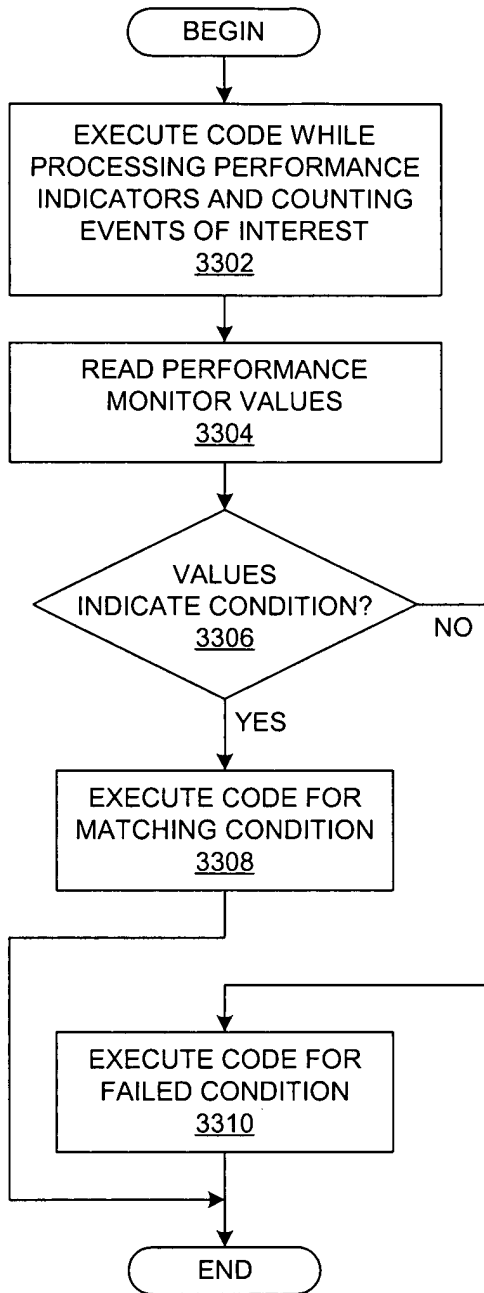


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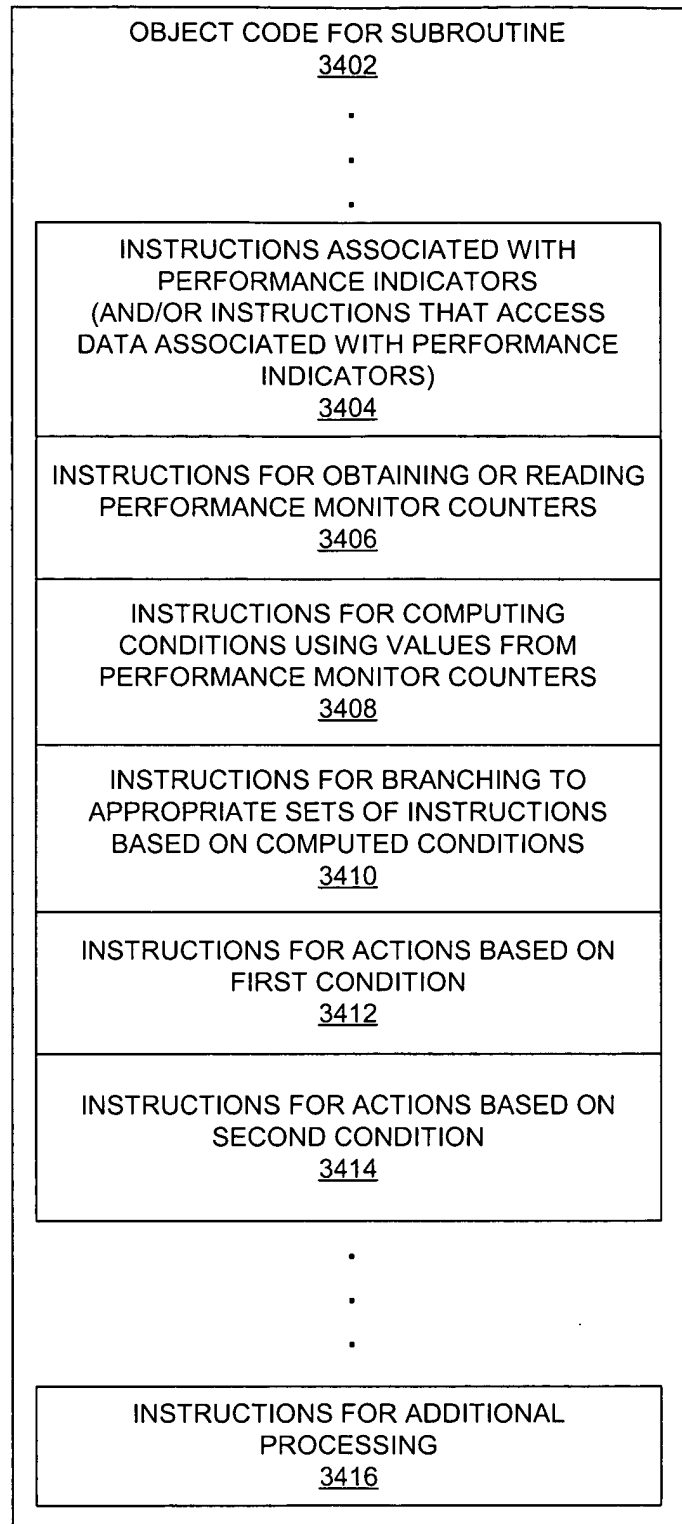


Figure 34

Method and system for autonomic performance improvements
in an application via memory relocation

17 / 25

```

3502 ~ Subroutine ProcessData {
    .
    .
    .
3530 ~ ##PerfMon CACHE_MISS, CACHE_HIT;

3504 ~ call GetData(dataStructure, numberDataItems);

3506 ~ call PerfMon_Read(valueA, CACHE_MISS, ~ 3508
                                valueB, CACHE_HIT); ~ 3510
                                3512      3514
                                }      }
3516 ~ if (valueA > valueB) then      3520
                                {
                                3518 ~ call ModifyDataStructure(ADJUST, dataStructure);

3522 ~ else if (valueA > (SCALE_CACHE_MISS*numberDataItems)) then

                                3524 ~ call ModifyDataStructure(RENEW, dataStructure);

3528 ~ call SortNewData(dataStructure) 3526
                                {
                                .
                                .
                                .
    }

```

Figure 35

```

Subroutine ProcessData {
    .
    .
    .
3610 ~ ##PerfMon CACHE_MISS, CACHE_HIT;

3602 ~ call GetData(dataStructure, numberDataItems);

3612 ~ ##PerfMon {
    3614 ~ if (CACHE_MISS > CACHE_HIT) then
        3604 ~ call ModifyDataStructure(ADJUST, dataStructure);
    3616 ~ else if (CACHE_MISS > (SCALE_CACHE_MISS*numberDataItems)) then
        3606 ~ call ModifyDataStructure(RENEW, dataStructure);
    }
3608 ~ call SortNewData(dataStructure)

    .
    .
    .
}

```

Figure 36

Method and system for autonomic performance improvements
in an application via memory relocation

18 / 25

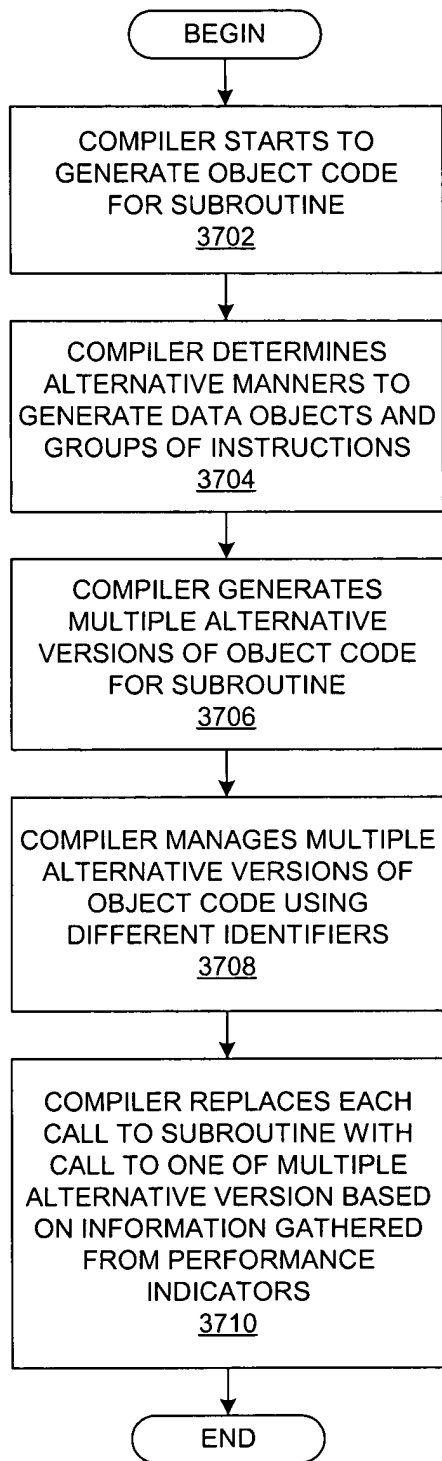


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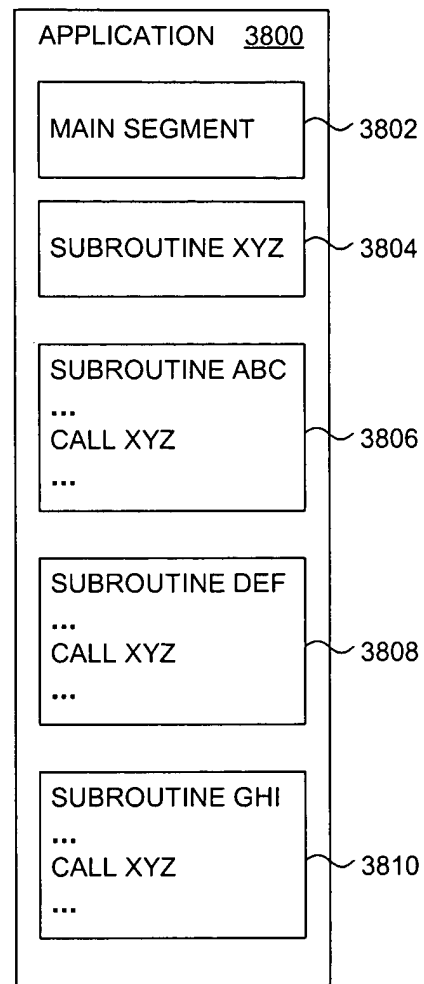


Figure 38

Method and system for autonomic performance improvements
in an application via memory relocation

19 / 25

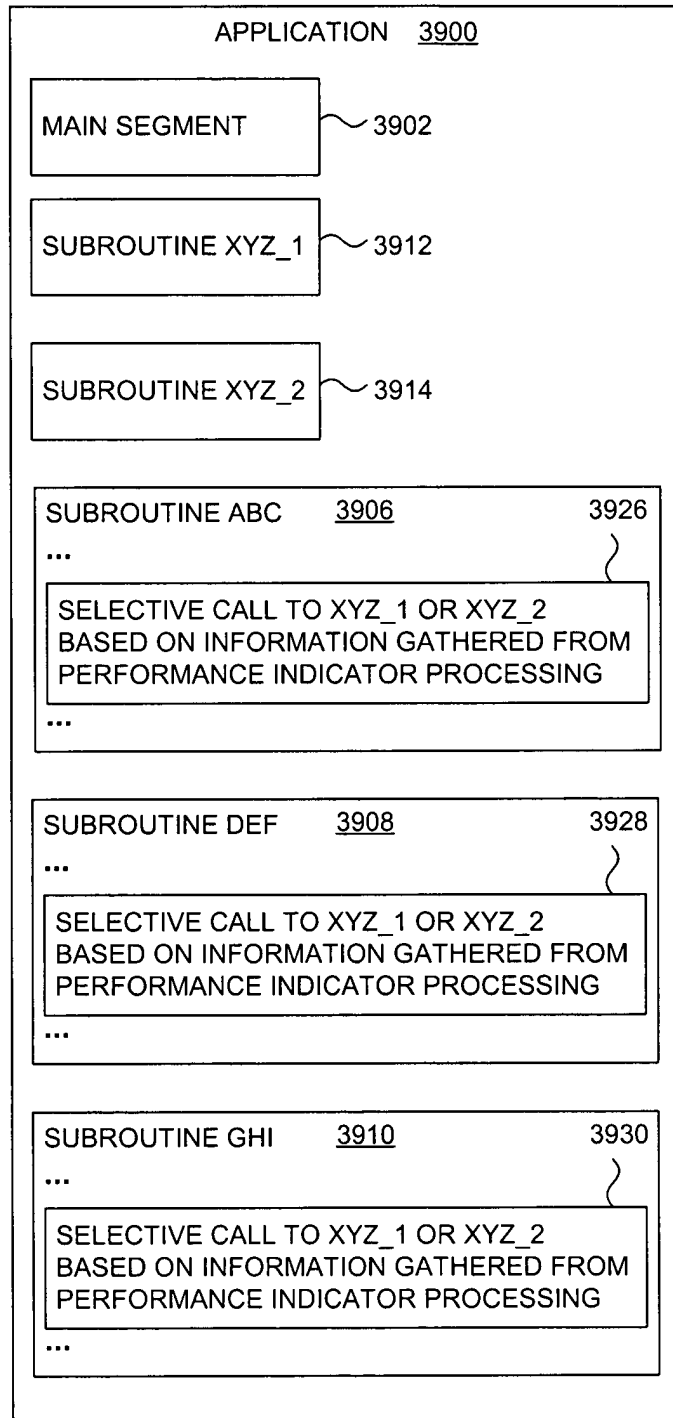


Figure 39

Method and system for autonomic performance improvements
in an application via memory relocation

20 / 25

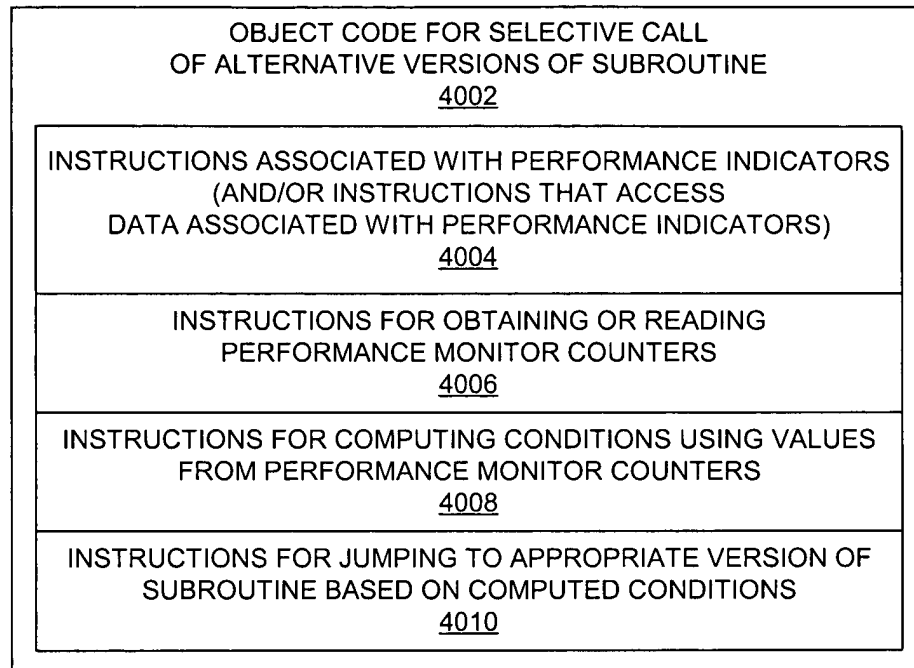


Figure 40

```

.
.
.
4102 ~ ##PerfMon CACHE_MISS on Array_XYZ;
4104 ~ Temp := Array_XYZ[ MAX_ARRAY_SIZE ];
4106 ~ call PerfMon_Read(valueA, CACHE_MISS);
4108 ~ if (valueA = 0) then
    4110 ~ call XYZ_1;
    else
    4112 ~ call XYZ_2;
.
.
.

```

Figure 41

Method and system for autonomic performance improvements
in an application via memory relocation

21 / 25

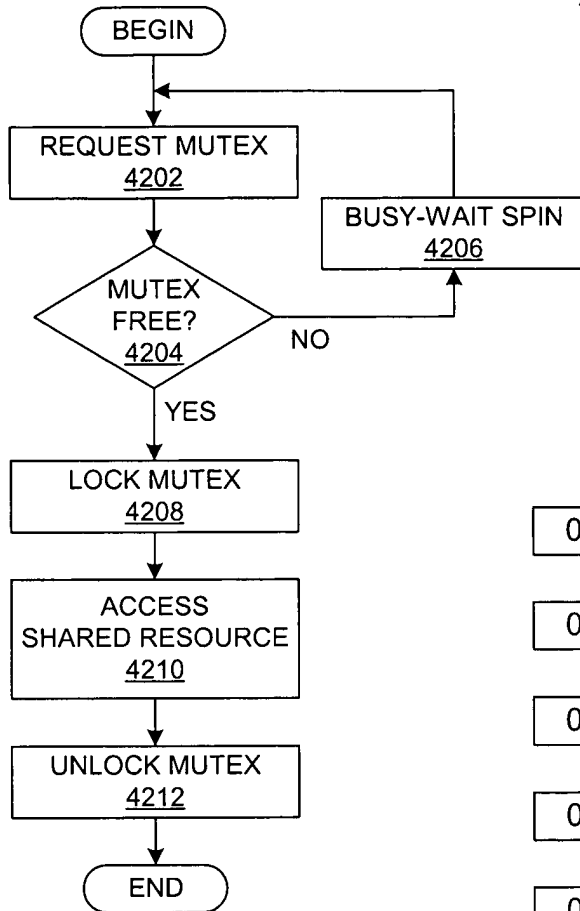


Figure 42
(PRIOR ART)

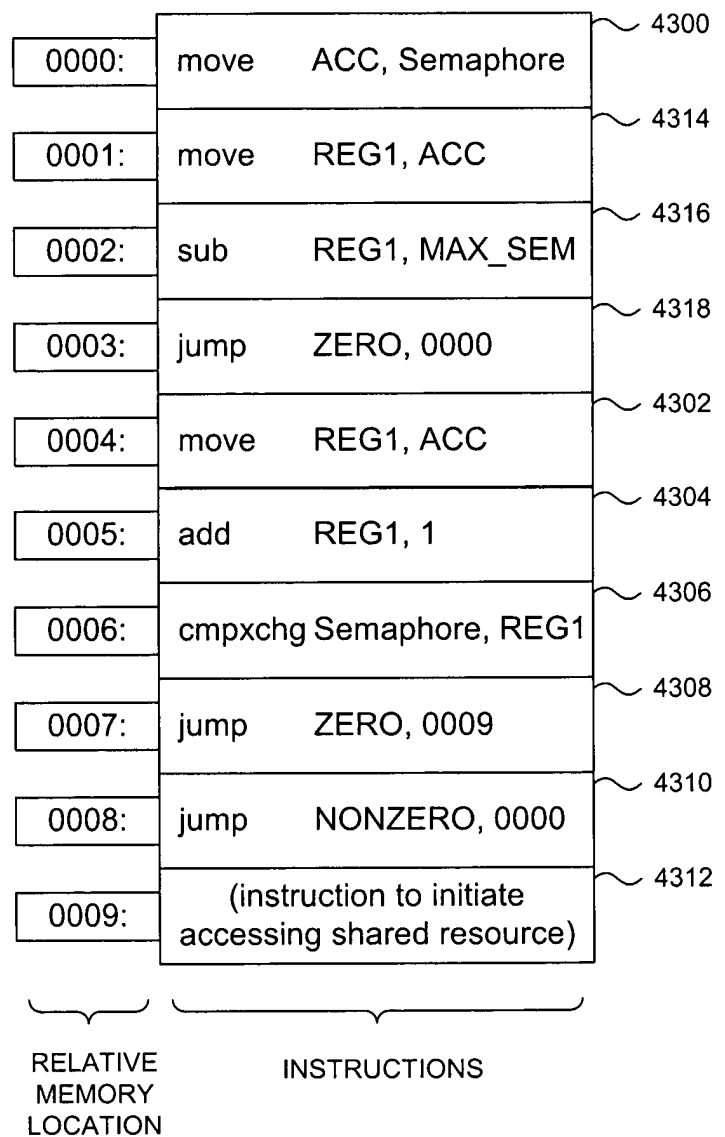


Figure 43
(PRIOR ART)

Method and system for autonomic performance improvements
in an application via memory relocation

22 / 25

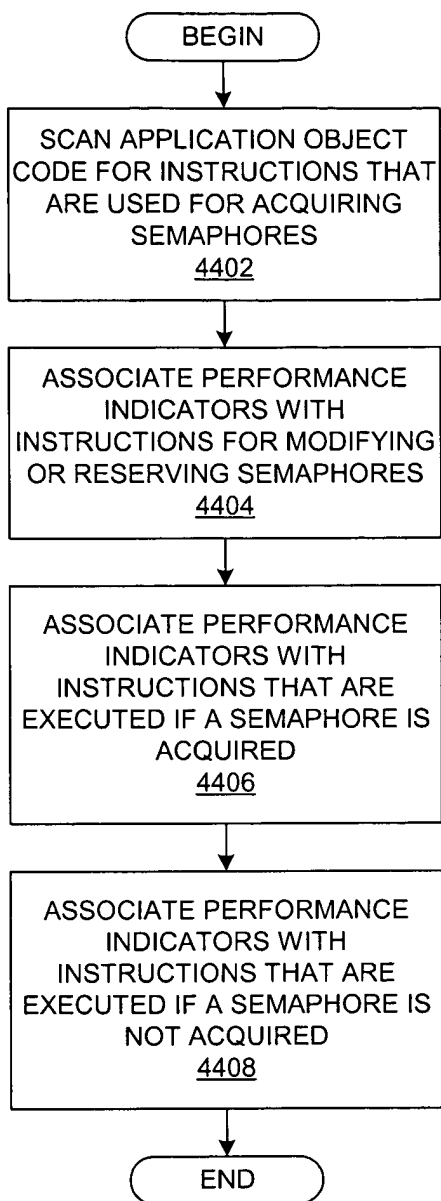


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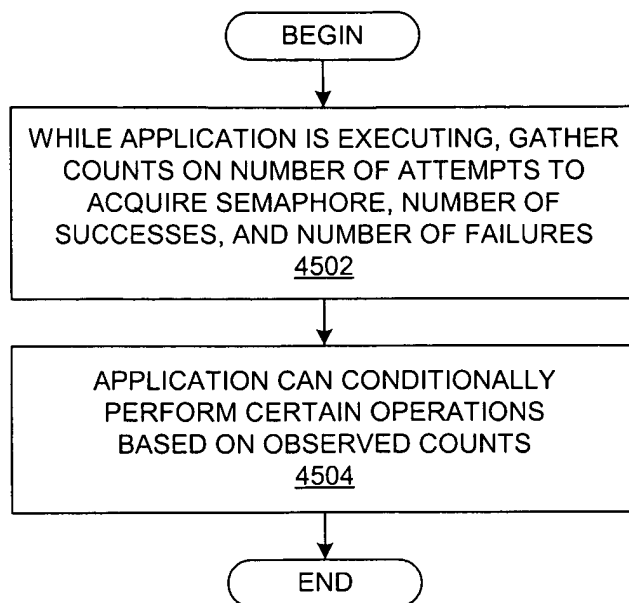


Figure 45

Method and system for autonomic performance improvements
in an application via memory relocation

23 / 25

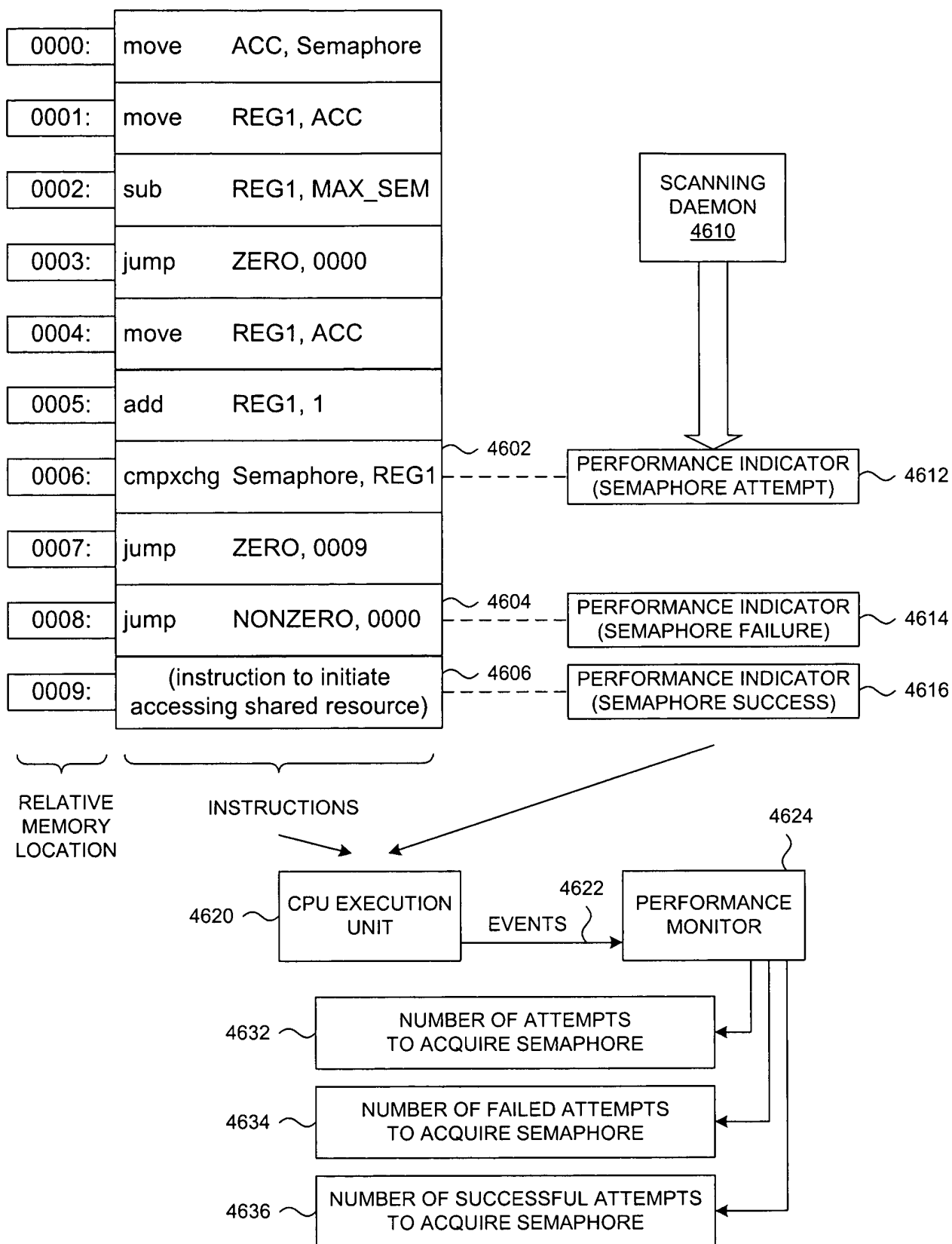


Figure 46

Method and system for autonomic performance improvements
in an application via memory relocation

24 / 25

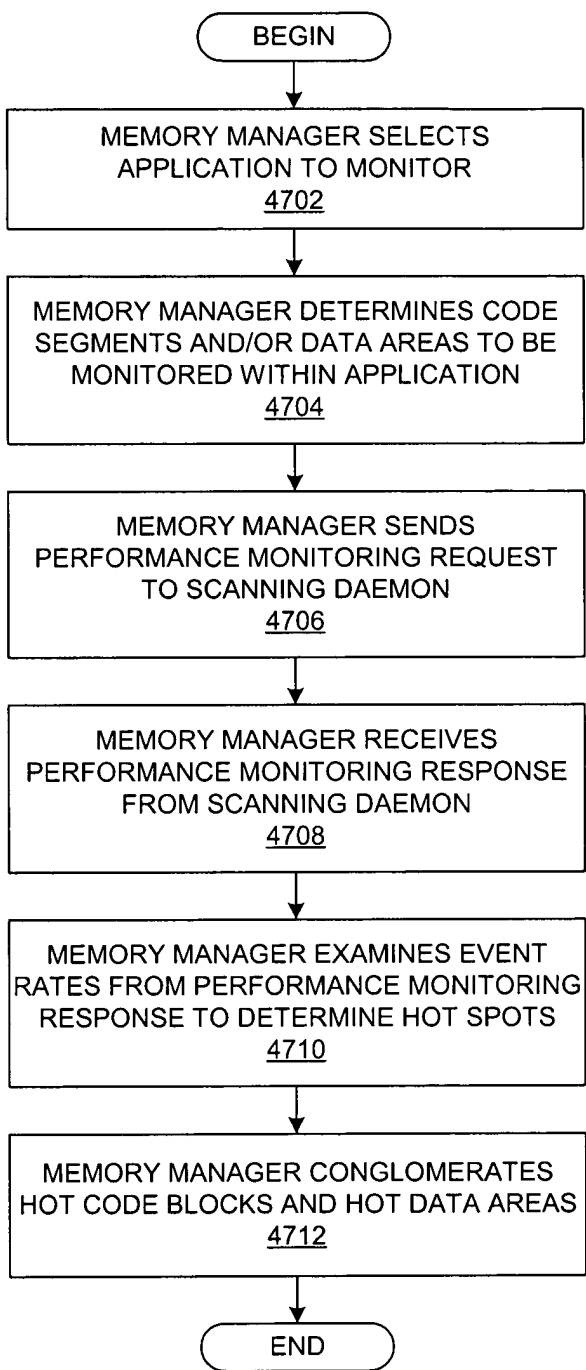


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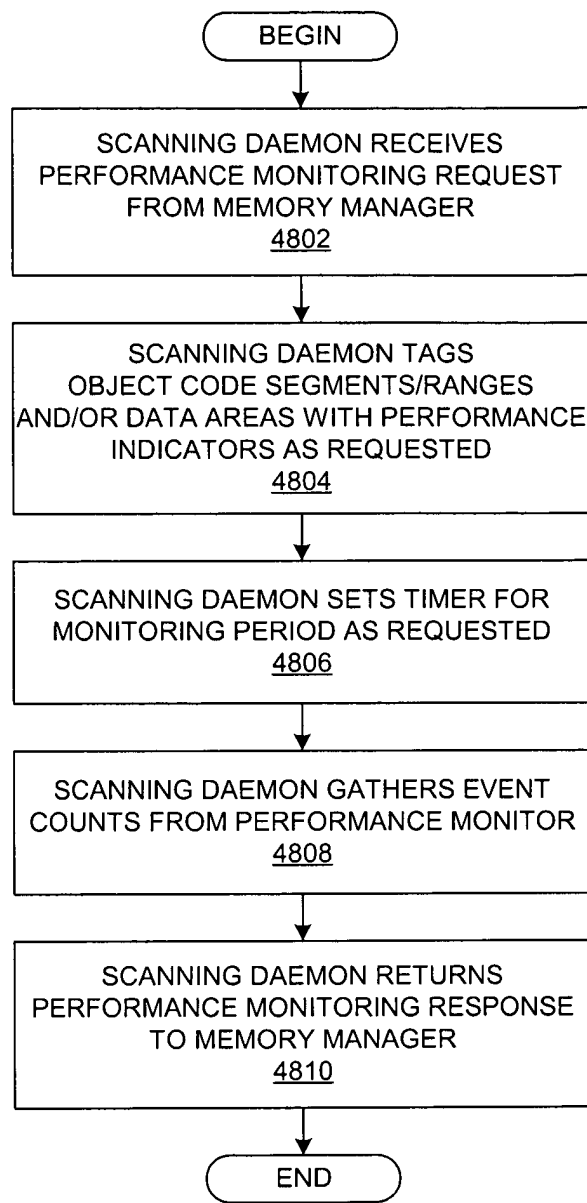


Figure 48

Method and system for autonomic performance improvements
in an application via memory relocation

25 / 25

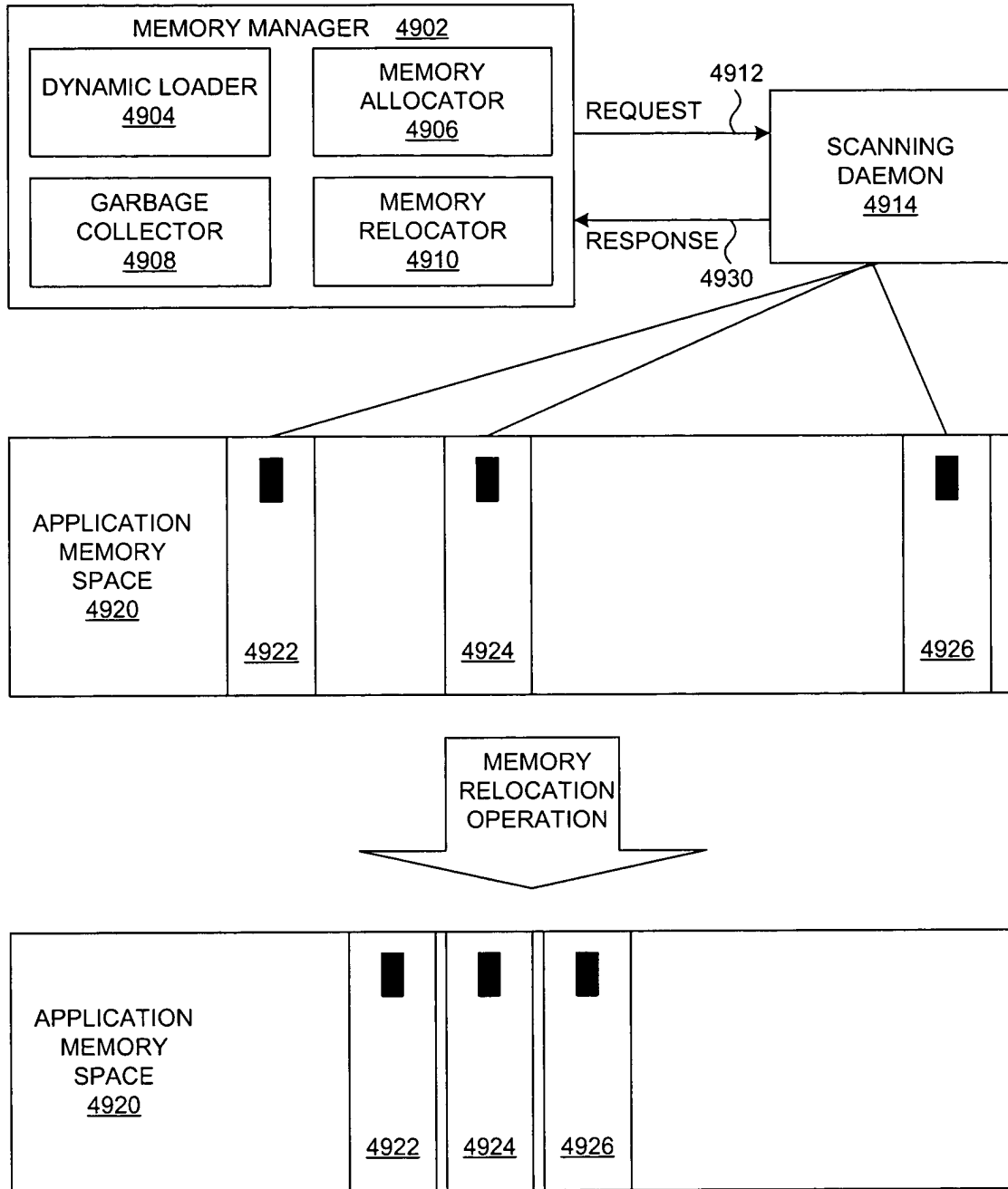


Figure 49